

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application. An identifier indicating the status of each claim is provided.

Listing of Claims

40. (Currently Amended) Apparatus for receiving electronic program guide (EPG) and program data transmitted on plural broadcast channels, said EPG data including image data representing images of reduced, less than normal size to identify respective programs which currently are and will be transmitted on several broadcast channels and said program data including video and audio data of plural programs currently being transmitted on respective broadcast channels, said apparatus comprising:

receiving means for receiving the program data transmitted on different broadcast channels and the EPG data transmitted with said program data;

separating means for separating the received EPG data from the received program data;

storage means for storing the separated EPG data;

display means for displaying a program represented by the separated program data;

read-out means for selectively retrieving said EPG data from said storage means;

and

means for displaying on said display means said images of reduced, less than normal size represented by said retrieved EPG data in superposition over the displayed program,[[[:]]

wherein said image data is sufficient for generating said reduced size images at said receiving means, such that said reduced size images are independent of said program data, and

wherein said reduced size images are superimposed via predetermined processing in a single-frame format on the program data and output for allocation to a unique transponder.

41. (Original) The apparatus of claim 40 wherein the received EPG data further includes text data representing information associated with each program identified by said image data; and said read-out means is operable to retrieve said text data from said storage means and supply the retrieved text data to said display means.

42. (Original) The apparatus of claim 41 further comprising image selecting means for selecting one of the displayed reduced size images to cause said read-out means to retrieve from said storage means the text data associated with the program identified by said selected reduced size image for display therewith.

43. (Original) The apparatus of claim 42 wherein said text data includes title data identifying the title of the associated program, broadcast data identifying data, time and broadcast channel at which said associated program is to be transmitted, and description data providing a description of said associated program.

44. (Original) The apparatus of claim 42 wherein said image selecting means comprises a cursor and cursor control means operable by a user to position said cursor at a desired one of the displayed reduced size images and thereby select said desired reduced size image.

45. (Original) The apparatus of claim 40 wherein said retrieved EPG data identifies respective programs which currently are being transmitted; and further comprising image selecting means for selecting one of the displayed reduced size images and tuning means for tuning said apparatus to the broadcast channel which transmits the program identified by the selected reduced size image.

46. (Original) The apparatus of claim 41 wherein said text data comprises program table data formed of title, data, time and broadcast channel data for each of the respective programs to be transmitted.

47. (Original) The apparatus of claim 46 wherein said text data additionally comprises program content data providing a summary of the content of each of the respective programs to be transmitted.

48. (Original) The apparatus of claim 47 wherein said program table data is associated with programs currently being transmitted and programs to be transmitted during a predetermined time period, and said program content data is associated with said programs

currently being transmitted and said programs to be transmitted during a fraction of said predetermined time period.

49. (Original) The apparatus of claim 47 wherein the received EPG data is multiplexed with the received program data.

50. (Original) The apparatus of claim 49 wherein the received program data is compressed and the receiving means includes decompressing means for expanding the compressed program data.

51. (Original) The apparatus of claim 49 wherein the EPG data and program data are received via satellite transmission channels, each satellite transmission channel comprising plural broadcast channels multiplexed with the EPG data; and wherein the separating means comprises demultiplexing means for demultiplexing each satellite transmission channel to recover said EPG data and the program data transmitted on each of said broadcast channels.

52. (Original) The apparatus of claim 51 further comprising tuning means for tuning said apparatus to a selected broadcast channel; memory means for storing the recovered program data transmitted on the selected broadcast channel; and means for reading out the program data stored in said memory means and supplying same to said display means to display said read out program data.

53. (Original) The apparatus of claim 41 wherein at least one of the received broadcast channels is a promotional channel and the program data transmitted thereon is promotional video and audio data representing particular programs transmitted on several other broadcast channels.

54. (Original) The apparatus of claim 53 wherein said display means is operable to display the retrieved text data in superposition over a promotional video display as a table of programs transmitted on non-promotional broadcast channels.

55. (Original) The apparatus of claim 53 wherein said display means is operable to display the retrieved text data in superposition over a promotional video display as a table of programs to be transmitted on a selected non-promotional broadcast channel.

56. (Original) The apparatus of claim 53 wherein said display means is operable to display the retrieved text data in superposition over a promotional video display as a description of a selected program to be transmitted on a non-promotional broadcast channel.

57. (Original) The apparatus of claim 40, further comprising a memory for pre-storing predetermined display indicia, said receiving means being operable to receive as part of said EPG data access information for accessing selected display indicia, said read-out means being operable to read out said selected display indicia in response to the received access

information; and said display means being operable to display said selected display indicia in superposition over said displayed program.

58. (Original) The apparatus of claim 41 wherein said display means is operable to display a text window superimposed over said displayed program; and further comprising image selecting means for selecting one of the displayed reduced size images to cause said read-out means to retrieve said text data representing information associated with the program identified by said selected reduced size image for display in said text window.

59. (Original) The apparatus of claim 58 wherein the text data displayed in said text window includes title of said identified program and broadcast channel over which said identified program is transmitted.

60-86. (Canceled)

87. (Currently Amended) A method of transmitting image-based promotional data associated with programs which are to be transmitted, comprising the steps of:

generating said image-based promotional data including image data identifying corresponding programs which are to be transmitted, said image data representing reduced size images which have a display size that is less than the display size for displayable data of said programs;

providing program data constituting at least one program currently being transmitted;

combining said image-based promotional data and said program data to generate combined data; ~~and~~

transmitting the combined data_[;]

wherein said image data is sufficient for generating said reduced size images at a receiver, such that said reduced size images are independent of said program data;

superimposing said reduced size images via predetermined processing in a single-frame format on the program data; and

outputting the single-frame format reduced sized images for allocation to a unique transponder.

88. (Previously Presented) The method of claim 87, wherein said image-based promotional data includes text data.

89. (Previously Presented) The method of claim 88, wherein said text data represents at least one of title data identifying the title of a program to be transmitted, transmission data identifying date and time at which said program is to be transmitted and description data providing a description of the program to be transmitted.

90. (Previously Presented) The method of claim 87, further comprising the steps of providing text data associated with said at least one program currently being transmitted, combining said text data with said image-based promotional data and said program data; and transmitting the combined image-based promotional data, program data and text data.

91. (Previously Presented) The method of claim 87, wherein said step of providing program data comprises supplying video and audio data of plural programs, each being transmitted over a respective channel, and compressing said video and audio data to produce compressed program data of said plural programs.

92. (Currently Amended) A method of receiving image-based promotional data and program data transmitted on plural channels, said image-based promotional data including image data identifying corresponding programs which currently are and will be transmitted on several channels, said image data representing reduced size images which have a display size that is less than the display size for displayable data of said programs, and said program data including video and audio data of plural programs currently being transmitted on respective channels, said method comprising the steps of:

receiving the program data transmitted on different channels and the image-based promotional data transmitted with said program data;

separating the received image-based promotional data from the received program data;

storing the separated image-based promotional data;

displaying a program represented by the separated program data;

selectively retrieving said stored image-based promotional data; and

displaying said reduced size images represented by said retrieved image-based promotional data, the reduced size images being displayed in superposition over the displayed program.]]]]

wherein said image data is sufficient for generating said reduced size images at a receiver, such that said reduced size images are independent of said program data, superimposing said reduced size images via predetermined processing in a single-frame format on the program data; and
outputting the single-frame format reduced sized images for allocation to a unique transponder.

93. (Previously Presented) The method of claim 92, wherein said retrieved image-based promotional data identifies respective programs which currently are being transmitted; and further comprising the steps of selecting one of the reduced size images and displaying the program identified by the selected reduced size image.

94. (Previously Presented) The method of claim 92, wherein the received image-based promotional data further includes text data representing information associated with each program identified by said image data, said text data being selectively retrieved from said stored image-based promotional data and displayed.

95. (Previously Presented) The method of claim 94, further comprising the steps of selecting one of the displayed reduced size images and displaying the selected reduced size image and the text data associated with the program identified by said selected reduced size image.

96. (Previously Presented) The method of claim 95, wherein said text data includes title data identifying the title of the associated program, transmission data identifying date, time and channel at which said associated program is to be transmitted, and description data providing a description of said associated program.

97. (Previously Presented) The method of claim 92, wherein the received image-based promotional data is multiplexed with the received program data.

98. (Previously Presented) The method of claim 92, wherein the received program data is compressed and the step of receiving the program data includes the step of expanding the compressed program data.

99. (Currently Amended) Apparatus for transmitting image-based promotional data associated with programs which are to be transmitted, comprising:

generating means for generating said image-based promotional data including image data corresponding to respective programs which are to be transmitted, said image data representing reduced size images which have a display size that is less than the display size for displayable data of said programs;

a source of program data constituting at least one program currently being transmitted;

combining means for combining said image-based promotional data and said program data to generated combined data; and

transmission means for transmitting the combined data. [[:]]

wherein said image data is sufficient for generating said reduced size images at a receiving means, such that said reduced size images are independent of said program data, and

wherein said reduced size images are superimposed via predetermined processing in a single-frame format on the program data and output for allocation to a unique transponder.

100. (Previously Presented) The apparatus of claim 99, wherein said image-based promotional data includes text data.

101. (Previously Presented) The apparatus of claim 100, wherein said text data includes data representing at least one of title data identifying the title of a program to be transmitted, transmission data identifying date and time at which said program is to be transmitted and description data providing a description of the program to be transmitted.

102. (Previously Presented) The apparatus of claim 99, further comprising means for generating text data associated with said at least one program currently being transmitted; and means for combining said text data with said image-based promotional data and said program data; and wherein said transmission means transmits the combined image-based promotional data, program data and text data.

103. (Previously Presented) The apparatus of claim 102, wherein said text data associated with said at least one program comprises at least one of title data identifying the title

of the program currently being transmitted, category data identifying a category type of the program currently being transmitted, and transmission channel data identifying the transmission channel over which said program is currently being transmitted.

104. (Previously Presented) The apparatus of claim 99, wherein said source of program data comprises means for supplying video and audio data of plural programs, each being transmitted over a respective channel, and data compression means for compressing said video and audio data to produce compressed program data of said plural programs.

105. (Currently Amended) Apparatus for receiving image-based promotional data and program data transmitted on plural channels, said image-based promotional data including image data corresponding to respective programs which currently are and will be transmitted on several channels, said image data representing reduced size images which have a display size that is less than the display size for displayable data of said programs, and said program data including video and audio data of plural programs currently being transmitted on respective channels, said apparatus comprising:

receiving means for receiving the program data transmitted on different channels and the image-based promotional data transmitted with said program data;

separating means for separating the received image-based promotional data from the received program data;

storage means for storing the separated image-based promotional data;

display means for displaying a program represented by the separated program data;

read-out means for selectively retrieving said image-based promotional data from
said storage means; and

means for displaying on said display means said reduced size images represented
by said retrieved image-based promotional data in superposition over the displayed program_{[[;]]}

wherein said image data is sufficient for generating said reduced size
images at said receiving means, such that said reduced size images are independent of said
program data, and

wherein said reduced size images are superimposed via predetermined
processing in a single-frame format on the program data and output for allocation to a unique
transponder.

106. (Previously Presented) The apparatus of claim 105, wherein the received
image-based promotional data further includes text data representing information associated with
each program identified by said image data; and said read-out means is operable to retrieve said
text data from said storage means and supply the retrieved text data to said display means.

107. (Previously Presented) The apparatus of claim 106, wherein said text data
includes title data identifying the title of the associated program, transmission data identifying
data, time and channel at which said associated program is to be transmitted, and description data
providing a description of said associated program.

108. (Previously Presented) The apparatus of claim 105, further comprising
image selecting means for selecting one of the displayed reduced size images to cause said read-

out means to retrieve from said storage means the text data associated with the program identified by said selected reduced size image for display therewith.

109. (Previously Presented) The apparatus of claim 105, wherein the received image-based promotional data is multiplexed with the received program data.

110. (Previously Presented) The apparatus of claim 105, wherein the received program data is compressed and the receiving means includes decompressing means for expanding the compressed program data.

111. (Previously Presented) The apparatus of claim 105, wherein at least one of the received channels is a promotional channel and the program data transmitted thereon is promotional video and audio data representing particular programs transmitted on several other channels.

112. (Previously Presented) The apparatus of claim 105, further comprising a memory for pre-storing predetermined display indicia, said receiving means being operable to receive as part of said image-based promotional data access information for accessing selected display indicia, said read-out means being operable to read out said selected display indicia in response to the received access information; and said display means being operable to display said selected display indicia in superposition over said displayed program.

113. (Currently Amended) A method of transmitting and receiving image-based promotional data associated with programs which are to be transmitted, comprising the steps of:

generating said image-based promotional data including image data corresponding to respective programs which are to be transmitted, said image data representing reduced size images which have a display size that is less than the display size for displayable data of said programs;

providing program data constituting at least one program currently being transmitted;

combining said image-based promotional data and said program data to generate combined data;

transmitting the combined data;

receiving the combined program and image-based promotional data;

separating the received image-based promotional data from the received program data;

storing the separated image-based promotional data;

displaying the program represented by the separated program data;

selectively retrieving said stored image-based promotional data; and

displaying said reduced size images represented by said retrieved image-based promotional data, the reduced size images being displayed in superposition over the displayed program.]]]]

wherein said image data is sufficient for generating said reduced size images at a receiver, such that said reduced size images are independent of said program data,

superimposing said reduced size images via predetermined processing in a single-frame format on the program data; and
outputting the single-frame format reduced sized images for allocation to a unique transponder.

114. (Previously Presented) The method of claim 113, wherein said image-based promotional data further includes text data.

115. (Previously Presented) The method of claim 114, wherein said text data represents information associated with said programs to be transmitted, said information comprising at least one of title data identifying the title of a program to be transmitted, transmission data identifying date and time at which said program is to be transmitted and description data providing a description of the program to be transmitted.

116. (Previously Presented) The method of claim 113, wherein said step of providing program data comprises supplying video and audio data of plural programs, each being transmitted over a respective channel, and compressing said video and audio data to produce compressed program data of said plural programs.

117. (Previously Presented) The method of claim 113, further comprising the steps of selecting one of the displayed reduced size images and displaying the program identified by the selected reduced size image.

118. (Previously Presented) The method of claim 113, wherein the combined image-based promotional data and program data are multiplexed together and the received program data is compressed; and wherein the step of receiving the program data includes the step of expanding the compressed program data.

119. (Previously Presented) The method of claim 113, wherein plural channels of program data are transmitted; and at least one of the received channels is a promotional channel and the program data transmitted thereon is promotional video and audio data representing particular programs transmitted on several other channels.

120. (Previously Presented) The method of claim 113, further comprising the steps of pre-storing predetermined display indicia; transmitting as part of said image-based promotional data access information for accessing selected display indicia; reading out said selected display indicia in response to received access information; and displaying said selected display indicia in superposition over said displayed program.

121. (Currently Amended) Apparatus for transmitting and receiving image-based promotional data associated with programs which are to be transmitted, comprising:
generating means for generating said image-based promotional data including image data corresponding to respective programs which are to be transmitted, said image data representing reduced size images which have a display size that is less than the display size for displayable data of said programs;

a source of program data constituting at least one program currently being transmitted;

combining means for combining said image-based promotional data and said program data to generated combined data;

transmission means for transmitting the combined data;

receiving means for receiving the combined program and image-based promotional data;

separating means for separating the received image-based promotional data from the received program data;

storage means for storing the separated image-based promotional data;

display means for displaying the program represented by the separated program data;

read-out means for selectively retrieving said image-based promotional data from said storage means; and

means for displaying on said display means said reduced size images represented by said retrieved image-based promotional data in superposition over the displayed program_[:];

wherein said image data is sufficient for generating said reduced size images at said receiving means, such that said reduced size images are independent of said program data_and

wherein said reduced size images are superimposed via predetermined processing in a single-frame format on the program data and output for allocation to a unique transponder.

122. (Previously Presented) The apparatus of claim 121, wherein said image-based promotional data further includes text data.

123. (Previously Presented) The apparatus of claim 122, wherein said text data represents information associated with said programs to be transmitted, said information comprising at least one of title data identifying the title of a program to be transmitted, transmission data identifying date and time at which said program is to be transmitted and description data providing a description of the program to be transmitted.

124. (Previously Presented) The apparatus of claim 121, wherein said source of program data comprises means for supplying video and audio data of plural programs, each being transmitted over a respective channel, and data compression means for compressing said video and audio data to produce compressed program data of said plural programs.

125. (Previously Presented) The apparatus of claim 121, wherein the combined image-based promotional data and program data are multiplexed together and the received program data is compressed; and wherein the receiving means includes decompressing means for expanding the compressed program data.

126. (Previously Presented) The apparatus of claim 121, wherein said storage means includes a memory for pre-storing predetermined display indicia, said generating means being operable to generate as part of said image-based promotional data access information for accessing selected display indicia, said read-out means being operable to read out said selected

display indicia in response to received access information; and said display means being operable to display said selected display indicia in superposition over said displayed program.